



NAVAL POSTGRADUATE SCHOOL
CENTER FOR INFORMATION SYSTEMS SECURITY STUDIES AND RESEARCH

Running CyberCIEGE on Linux without Windows

May 31, 2013

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Table of Contents

1	Running CyberCIEGE on Linux.....	1
2	Install Wine.....	1
3	Install the Foxit PDF Reader	1
4	Install CyberCIEGE	2
4.1	Run CyberCIEGE.....	2
5	Limitations.....	3
5.1	Characters have disjoint body parts	3
5.2	Links from the Encyclopedia	4
5.3	No desktop icon to start the game	4

1 Running CyberCIEGE on Linux

CyberCIEGE was built to run on Windows environments, including Windows VMs on VMWare and Parallels (on Macs). CyberCIEGE will also run on Linux using Wine, though it is a bit less robust in that environment and the characters may look very strange. Wine is an open source application that allows some Windows applications to run on Unix type operating systems.

If you have access to a Windows platform (or a Windows virtual machine), that is the preferred way to run CyberCIEGE.

If you have a Mac and no access to a Windows virtual machine, you can install VMWare Fusion or Parallels and then install a Linux distribution such as Ubuntu Desktop (which has been tested with version 12.04). VirtualBox does not appear to work with the 3D graphics functions needed by Wine.

2 Install Wine

If your Linux system already has Wine installed (e.g., it is a CS3600 VM), you can skip this step. Do determine if you have a suitable version of Wine installed, type the following into a terminal:

```
wine -version
```

The version should be at least 1.4.

Otherwise, within Linux (assuming Ubuntu), open a terminal at type:

```
sudo apt-get install wine
```

Then type:

```
winecfg
```

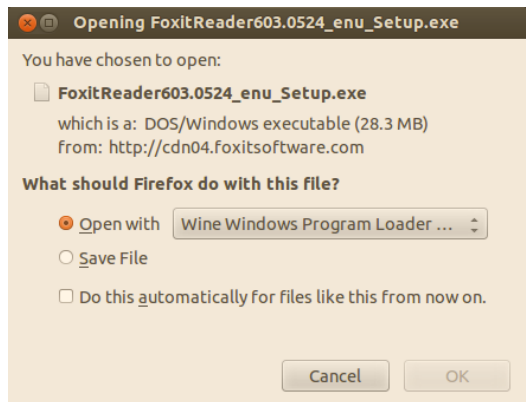
Then select the Graphics tab and check “Emulate a virtual desktop” and provide a desktop size of 1280 x 900 (or, if your total screen size is not that big, whatever your screen size is).

Once you have installed Wine, the system will automatically execute “.exe” programs within the Wine environment.

3 Install the Foxit PDF Reader

Lab manuals can be accessed from within CyberCIEGE. These are in PDF format, which requires a PDF reader. Using a Firefox browser in Linux, go to the Foxit site and download their free PDF reader, http://www.foxitsoftware.com/Secure_PDF_Reader/

Do not go looking for a Linux version of the reader, you want the default Windows version. Click the download link and, when prompted, select “Open with Wine Windows Program Loader”, and “OK”.



Accept the defaults (though you may choose to not put an icon on your desktop).

4 Install CyberCIEGE

Use Firefox to follow the CyberCIEGE link on the CS3600 CLE, or select “Get CyberCIEGE from the cistr.nps.edu/CyberCIEGE/latest.html web page. When prompted, select “Open with Wine Windows Program Loader”, and “OK”.

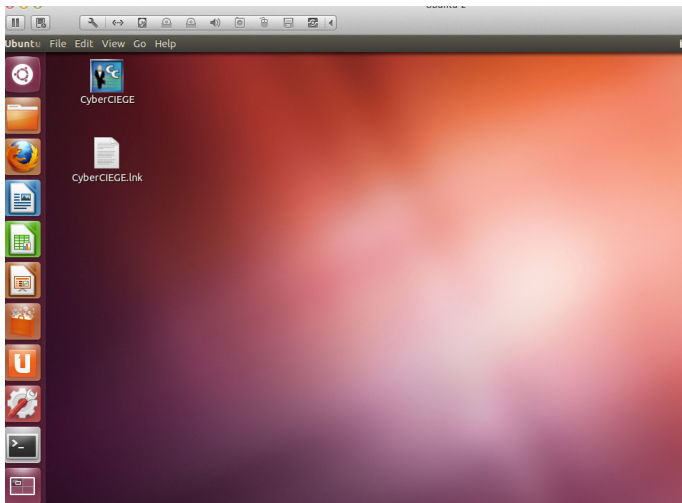
When prompted for a password, provide the password from the CS3600 CLE for CyberCIEGE, or the password provided to you by your instructor.

Accept the default setup values.

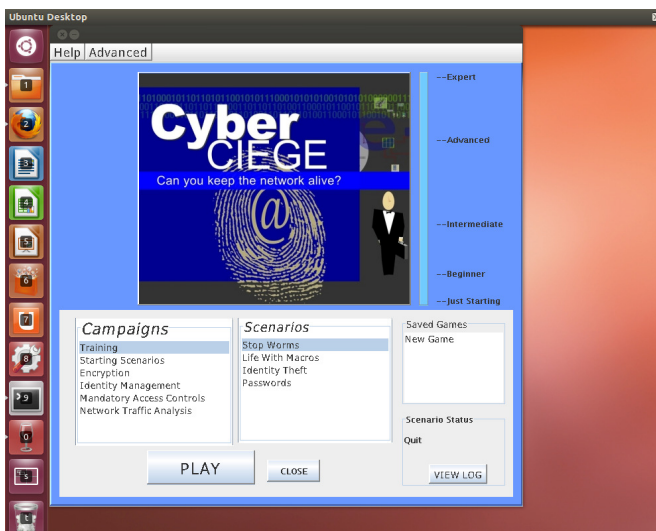
Make sure your VM desktop has a resolution of at least 1024 x 768. A good value is 1280 x 800 (to provide room for encyclopedia pages). In Ubuntu, click the Settings icon and select “Displays”.

4.1 Run CyberCIEGE

One of the “less than robust” effects of using Wine is that it puts two icons on your desktop for CyberCIEGE. **Do not open the blue icon.** It can be deleted (right click, “move to trash”). To start CyberCIEGE, double click on the white icon labeled, “CyberCIEGE.lnk”. You may want to first “mute” or turn down the volume because the sound on Wine can be garbled.



The “campaign player” should start. From there, follow the “Getting Started with CyberCIEGE” document in the CS3600 CLE, or just go to the Help menu. Note you can turn off the intro movie and unlock all scenarios via the “Advanced Menu”.



5 Limitations

Running the game under Wine results in a few inconveniences, (beyond the strange desktop icons install on Ubuntu noted above.) These are listed below.

5.1 Characters have disjoint body parts

Game character body parts are not all properly attached. Though distracting and bizarre, this does not affect game play.

5.2 Links from the Encyclopedia

Some links within the CyberCIEGE encyclopedia cannot be followed. These include links to the tutorial videos and links to lab manuals. The videos and lab manuals can all be found here: <http://www.cisr.us/cyberciege/CyberCIEGE%20Syllabus.html>

Sound is garbled

Sound is not needed to play the CyberCIEGE scenarios. Tutorial videos include narration, but these should be viewed from the CyberCEIGE website as noted above in “Links from the Encyclopedia”.

5.3 No desktop icon to start the game

Some Linux/Wine combinations do not result in a CyberCIEGE desktop icon via which to start the game. In such cases, start a terminal and do the following to start the game:

```
cd Home/.wine/drive_c/Program Files/CyberCIEGE
wine cmd
bat/runPlayer.bat go
```